In the Claims

This listing of claims will replace all prior versions and listings of claims in this application.

1 (currently amended). A peptide that is biologically active at melanocortin receptors comprising an AGRP(109-118) analogue template of SEQ ID NO:3, [[and]] wherein AGRP (111-113) residues of the AGRP (109-118) template are substituted with a melanocortin agonist-based bioactive determinant sequence ~~sequences which have been substituted for the analogous template sequences~~, wherein

a) the melanocortin agonist-based bioactive determinant sequence is selected from the group consisting of:

i) Trp-Arg-Phe;

ii) Trp-Arg-DPhe;

iii) Phe-Arg-Trp;

iv) DPhe-Arg-Trp;

v) His-Phe-Arg-Trp; and

vi) His-DPhe-Arg-Trp.

2 (original). The peptide according to claim 1, wherein the peptide is of any SEQ ID NOS:4-7, 9, and 10.

3 (currently amended). The peptide according to claim 1, wherein at least one of the amino acids in the melanocortin agonist-based bioactive determinant sequence includes at least one amino acid ~~substituted within the sequence~~ is substituted with an amino acid selected from the group consisting of Ala; Aic; Bip; Lys; Nal(1'); Nal(2'); (pI)Phe; and Tic.

4 (cancelled).

5 (currently amended). The peptide according to claim [[4]]3, wherein the peptide is of any SEQ ID NOS:24-43.

6 (currently amended). The peptide according to claim 1, wherein the peptide further comprises a lactam bridge [[which]] that is substituted for the disulfide bridge of the AGRP(109-118) analogue template.

7 (original). The peptide according to claim 6, wherein the peptide is of any SEQ ID NOS:2 and 11.

8 (original). The peptide according to claim 6, wherein the peptide further comprises a second and a third bioactive determinant sequences at the N-terminal and C-terminal, respectively, wherein the second bioactive determinant sequence at the N-terminal is Ser-Tyr-Ser-Nle amino acid residues and the third bioactive determinant sequence at the C-terminal is Lys-Pro-Val amino acid residues.

9 (cancelled).

10 (cancelled).

11 (cancelled).

12 (cancelled).

13 (currently amended). A pharmaceutical composition comprising a peptide that is biologically active at melanocortin receptors comprising an AGRP(109-118) analogue template of SEQ ID NO:3, wherein AGRP (111-113) residues of the AGRP (109-118) template are substituted with a [[and]] melanocortin agonist-based bioactive determinant sequence sequences which have

been substituted for the analogous template sequences, and a pharmaceutically acceptable carrier or diluent, wherein

a) the melanocortin agonist-based bioactive determinant sequence is selected from the group consisting of:

i) Trp-Arg-Phe;
ii) Trp-Arg-DPhe;
iii) Phe-Arg-Trp;
iv) DPhe-Arg-Trp;
v) His-Phe-Arg-Trp; and
vi) His-DPhe-Arg-Trp.

14 (original). The pharmaceutical composition according to claim 13, wherein the peptide is of any SEQ ID NOS:4-7, 9, and 10.

15 (currently amended). The pharmaceutical composition according to claim 13, wherein at least one of the residues of the melanocortin agonist-based bioactive determinant sequence includes at least one amino acid substituted within the sequence is substituted with an amino acid selected from the group consisting of Ala; Atc; Bip; Lys; Nal(1'); Nal(2'); (pI)Phe; and Tic.

16 (cancelled).

17 (original). The pharmaceutical composition according to claim 16, wherein the peptide is of any SEQ ID NOS:24-43.

18 (currently amended). The pharmaceutical composition according to claim 13, wherein the peptide further comprises a lactam bridge [[which]] that is substituted for the disulfide bridge of the AGRP(109-118) template.

19 (original). The pharmaceutical composition according to claim 18, wherein the peptide is of any SEQ ID NOS:2 and 11.

20 (original). The pharmaceutical composition according to claim 18, wherein the peptide further comprises a second and a third bioactive determinant sequences at the N-terminal and C-terminal, respectively, wherein the second bioactive determinant sequence at the N-terminal is Ser-Tyr-Ser-Nle amino acid residues and the third bioactive determinant sequence at the C-terminal is Lys-Pro-Val amino acid residues.

21 (cancelled).

22 (cancelled).

23 (cancelled).

24 (cancelled).

25 (cancelled).

26 (cancelled).

27 (cancelled).

28 (previously presented). The composition of claim 13, wherein the composition is an oral composition.